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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/943,583

Applicant(s)

DAKSS ET AL.

Examiner

Farzana E. Hossain

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 14, 17-21, 35-43, 46-52, 56 and 61-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 14, 17-21, 35-43, 46-52, 56 and 61-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/01/2007 has been entered.

Response to Amendment

2. This office action is in response to communications filed 10/01/2007. Claims 1, 35, 56, 63, 66, 67 and 70 are amended. Claims 2-9, 19, 20, 36-43, 48, 49 are original. Claim 14, 17, 18, 21, 46, 47, 50-52, 55, 56, 61, 62, 64, 65, 68 and 69 are previously presented. Claims 10-13, 15, 16, 22-34, 44, 45, 53, 54, 57-60 are cancelled. Claims 71 and 72 are new.

Response to Arguments

3. Applicant's arguments filed 03/05/2007 have been fully considered but they are not persuasive.

Regarding Claims 1 and 35, the applicant argues that Wistendahl does not disclose the claimed object mapping table that stores an identifier to a corresponding one of a plurality of information data structures (Page 15). The applicant further argues that Wistendahl fails to teach or suggest the claimed plurality of information data structures and that even if N data were to identify the IDM program, it would not identify one of a plurality of IDM programs (Page 15). The applicant argues that the there is no suggestion or motivation to modify Wistendahl's N data were to identify the IDM program, it would not identify one of a plurality IDM programs.

In response to the argument, Wistendahl discloses an object mapping table or N data information which includes N data indexed to specific type of interactive use of the media content (Column 7, lines 55-57, Column 6, lines 17-59, Figure 2). Microsoft Press 3rd edition Computer Dictionary defines data structure as an organization scheme, such as a record or array, that can be applied to data to facilitate interpreting the data or performing operations on it. The N data is an organization scheme which applied to data to facilitate interpretation of the data or performing operations or for the interactive use of the media content. Wistendahl discloses the mask including an identifier or an object identifier for the hotspot with a A'(F) identifying object A or hotspot B'(F) identifying object B (Column 6, lines 17-38, Column 7, lines 1-10, Figure 2, Figure 3). Wistendahl discloses a mask including an identifier to the object mapping table and the object mapping table having indicia from the corresponding mask to storing an identifier to a corresponding one of a pluriaty of information data structures including A'(F_i) or B'(F_i) (Column 6, lines 17-38, Column 10, lines 8-67) and the corresponding

information data structure including information associated with the particular video object (Column 10, lines 57-67, Column 11, lines 1-40, Column 12, lines 1-18, 40-49).

Applicants argues that claims 63 and 67 are similar to limitations of claims 1 and 35 and are now in condition for allowance for reasons discussed above with respect to claims 1 and 35. Applicant states that dependent claims are in condition for allowance because they depend on allowable base claims.

In response to the arguments, please see response to arguments.

Information Disclosure Statement

4. The information disclosure statement filed 1-11-02, 5-13-04 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

The applicant has submitted many of the foreign patents and non-patent literature documents. However not all documents in the information disclosure statement filed 1-11-02, 5-13-04 have been submitted including IBM Technical Disclosure Bulletin's "User Controlled Display of Hypermedia Links Via Mouse Location" and "Visual Behavior of Multimedia Hypervideo Links for Motion Video".

5. The information disclosure statement (IDS) submitted 31 July 2006. The submission has met the minimum requirements of 37 CFR 1.97 and 37 CFR 1.98. Accordingly, the examiner is considering the IDS.

It is noted, however, that the large number of references, represents a significant burden for the examination of the instant application. Therefore, the references have only been considered to the extent possible given limited examination resources. Should the applicant be aware that one or more of these documents is particularly relevant to patentability, it is requested that applicant's provide a concise explanation of why the English language information is being submitted and how it is understood to be relevant.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7, 17-21, 35-41, 50-52, 56 and 63-70 under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al (US 6,357,042 and hereafter referred to as

"Srinivasan") in view of Wistendahl et al (US 6,496,981 and hereafter referred to as "Wistendahl")

Regarding Claims 1 and 35, Srinivasan discloses a hyperlinked broadcast system and a method of generating a hyperlinked video signal (Figure 1, Figure 14, Figure 18) comprising: a video headend or video source provides video information for a video program including a plurality of consecutive video frames (Figure 1, 12, Column 7, lines 22-25, Column 8, lines 13-14, 38-49),

an annotation system tracing or tracking movement of two or more video objects appearing in each of plurality of consecutive video frames from a first location to a second location (Column 8, lines 5-37) and generating annotation data (Column 6, lines 8-19) and annotation data timing information (Column 7, lines 21-30, Column 8, lines 5-50), the annotation data including only one mask for each video frame of the plurality of consecutive frames (Column 5, lines 54-65, Figure 3, Figure 4), each mask being stamped with the corresponding annotation data timing information based on a frame time of the corresponding video frame (Abstract, Column 7, lines 21-30, Column 8, lines 5-50), each mask including location (Figure 4, Column 8, lines 5-50) and graphic data of two or more graphic images to be overlaid on two or more video objects or entities in the corresponding video frame (Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47); and

an augmented video information transmission generator receiving the annotation data, the video information, and the annotation timing information, the augmented video information transmission generator generating an augmented video transmission signal

comprising annotation data, the annotation data timing information, and the video information, transmits the augmented video transmission signal to a receiver (Column 5, lines 54-65, Column 6, lines 29-33, Column 11, lines 36-37, Figure 18, Column 3, lines 53-55, Column 4, lines 3-7, 17-24),

wherein the augmented video information transmission generator associates the video information with the annotation data using the annotation data timing information (Column 5, lines 54-65, Column 6, lines 29-33, Column 11, lines 36-37),

wherein the receiver receiving the augmented video transmission signal is program for each of the plurality of consecutive video frames (Column 36, lines 41-49, Column 21, lines 34-52) to:

compare a current annotation data timing information with a current frame time of a current video frame (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52);

retrieve the location and graphics data of the two or more graphics images from the identified mask if the comparison results in a match (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52); and

overlay the two or more graphics images on the corresponding two or more video object appearing in the video frame based on the retrieved location and graphics data, wherein the overlaying of the two or more graphics images is synchronized on a frame by frame basis with the movement of two or more video objects from the first location to

the second location over the plurality of consecutive video frames (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 21-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52). Srinivasan discloses annotation data comprises a plurality of object data packets (Column 21, lines 14-25).

Srinivasan is silent on the mask including an identifier to an object mapping table including one or more of the plurality of object data packets, the object mapping table including at least one entry with an indicia from the corresponding mask identifying a particular video object, the entry further storing an identifier to a corresponding one of a plurality information data structures included in one or more of the plurality object data packets, the information data structures including information for the particular video object. Wistendahl discloses on annotation data further includes a plurality of object data packets (Figure 3, 32, Column 11, lines 30-65, Column 17, lines 8-10), the mask further including an identifier or hotspot to an object mapping table or N data information (including values for several objects such as object A, A'(F), and object B, B'(F)) included in the object data packets (Column 6, lines 17-38, Column 7, lines 1-10, Figure 2, Figure 3, Column 11, lines 30-65, Column 17, lines 8-10). Microsoft Press 3rd edition Computer Dictionary defines data structure as an organization scheme, such as a record or array, that can be applied to data to facilitate interpreting the data or performing operations on it. Wistendahl discloses the object mapping table including at least one entry with an indicia from the corresponding mask identifying a particular video object (Figure 2, Column 6, lines 17-38), the entry further storing an identifier to a

corresponding one of a plurality of information data structures included in one or more of the plurality of object data packets (Figure 2, Figure 3, Column 6, lines 17-38, Column 10, lines 8-67, Column 17, lines 1-13, Column 11, lines 30-65,), the information data structures including information for particular video object (Column 9, lines 59-67, Column 10, lines 1-67, Column 11, lines 1-40, Column 12, lines 1-18, 40-49).

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Srinivasan to include the mask further including an identifier or hotspot to an object mapping table or N data information included in the object data packets (Column 6, lines 17-38, Column 7, lines 1-10, Figure 2, Figure 3, Column 11, lines 30-65, Column 17, lines 8-10), the object mapping table including at least one entry with an indicia from the corresponding mask identifying a particular video object (Figure 2, Column 6, lines 17-38), the entry further storing an identifier to a corresponding one of a plurality of information data structures included in one or more of the plurality of object data packets (Figure 2, Figure 3, Column 6, lines 17-38, Column 10, lines 8-67, Column 17, lines 1-13, Column 11, lines 30-65,), the information data structures including information for particular video object (Column 9, lines 59-67, Column 10, lines 1-67, Column 11, lines 1-40, Column 12, lines 1-18, 40-49) as taught by Wistendahl in order to use media content for interactive television (Column 1, lines 12-14, 45-67) as disclosed by Wistendahl.

Regarding Claims 63 and 67, Srinivasan discloses a hyperlinked broadcast system and a method of generating a hyperlinked video signal comprising:

a video source providing video information for a video program including a plurality of video frames (Figure 1, 12, Column 7, lines 22-25, Column 8, lines 13-14, 38-49);

receiving video information for a video program including a plurality of video frames (Figure 1, 12, Column 7, lines 22-25, Column 8, lines 13-14, 38-49)

an annotation system generating annotation data and annotation data timing information (Column 8, lines 5-37), the annotation data including a plurality of masks and a plurality of object data packets (Figure 4, Figure 3, Column 8, lines 5-37), each mask corresponding to a particular video frame of a video program (Figure 3, 31, 33, 29, 27) and including graphics data associated with one or more video objects in the particular video frame (Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47), each mask being associated with the corresponding annotation data timing information (Figure 4, Figure 3, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47), and an object mapping table included in at least a particular one of the plurality of object data packets (Figure 4), the object mapping table including an entry associated with each of the one or more video objects in the particular video frame (Figure 3, Figure 4), communicating the annotation data timing information, the annotation data and the video information to an augmented transmission generator (Figure 1, Figure 3, Figure 4) and

an augmented video information transmission generator receiving the annotation data, the video information, and the annotation data timing information, the augmented video information transmission generator generating an augmented video transmission

signal comprising the annotation data, the annotation data timing information, and the video information, and transmitting the augmented video transmission signal to a receiver, wherein the augmented video information transmission generator associates the video information with the annotation data using the annotation data timing information (Column 5, lines 54-65, Column 6, lines 29-33, Column 11, lines 36-37, Figure 18, Column 3, lines 53-55, Column 4, lines 3-7, 17-24). Srinivasan discloses annotation data comprises a plurality of object data packets (Column 21, lines 14-25).

Srinivasan is silent on object mapping table as claimed.

Wistendahl discloses on annotation data further includes a plurality of object data packets (Figure 3, 32, Column 11, lines 30-65, Column 17, lines 8-10), the mask further including an identifier or a hyperlink to an object mapping table or N data information (including values for several objects such as object A, A'(F), and object B, B'(F))) (Column 6, lines 17-38, Column 7, lines 1-10). Microsoft Press 3rd edition Computer Dictionary defines data structure as an organization scheme, such as a record or array, that can be applied to data to facilitate interpreting the data or performing operations on it. Wistendahl discloses the object mapping table including at least one entry with an indicia from the corresponding mask identifying a particular video object or one entry associated with each of the one or more video objects in the particular video frame (Figure 2, Column 6, lines 17-38), each entry in the object mapping table storing an identifier to one or one or more information data structures included in one or more of the plurality object data packets (Figure 2, Figure 3, Column 6, lines 17-38, Column 10, lines 8-67, Column 17, lines 1-13, Column 11, lines 30-65), the information data

structures including information for particular video object (Column 9, lines 59-67, Column 10, lines 1-67, Column 11, lines 1-40, Column 12, lines 1-18, 40-49).

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Srinivasan to include the mask further including an identifier to an object mapping table or N data information (including values for several objects) (Column 6, lines 17-38, Column 7, lines 1-10) such as including at least one entry with an indicia from the corresponding mask identifying a particular video object (Figure 2, Column 6, lines 17-38), the entry storing an identifier to one or one or more information data structures included in one or more of the plurality object data packets (Figure 2, Figure 3, Column 6, lines 17-38, Column 10, lines 8-67, Column 17, lines 1-13, Column 11, lines 30-65), the information data structures including information for particular video object (Column 9, lines 59-67, Column 10, lines 1-56) as taught by Wistendahl in order to use media content for interactive television (Column 1, lines 12-14, 45-67), to author exiting media content using tools to reduce development time (Column 2, lines 43-46) and so that media contact is kept uncorrupted so that the content can be displayed on any media delivery system or display platform (Column 3, lines 2-5) as disclosed by Wistendahl.

Regarding Claims 2 and 36, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses the augmented video information transmission generator comprises a component, which inserts data into the

VBI or a vertical blanking insertion device (Column 35, lines 60-62, Column 36, lines 36-40).

Regarding Claims 3 and 37, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses that the augmented video information transmission generator comprises a digital video data multiplexer (Column 36, lines 25-32).

Regarding Claims 4 and 38, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses that the timing information comprises at least one of timestamp information and a frame number information (Column 3, Column 4, lines 3-16, Column 7, line 23, Column 8, lines 5-14).

Regarding Claims 5 and 39, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses the programs comprise digital video signal (Column 36, lines 25-27).

Regarding Claims 6 and 40, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses the programs comprise analog video signal (Column 36, lines 36-40).

Regarding Claims 7, Srinivasan and Wistendahl disclose all the limitations of Claim 1. Srinivasan discloses a post production environment (Figure 1, 11, Figure 18, 251, 253, 255), and a headend comprising the augmented video information transmission generator (Column 6, lines 33-35, Figure 18, 259), the video information and annotation data timing information are combined by the post production

environment and transmitted to the headend (Column 7, lines 20-48, Column 8, lines 5-49, Column 35, lines 20-36).

Regarding Claims 8, Srinivasan and Wistendahl disclose all the limitations of Claim 7. Wistendahl discloses that the headend is a cable headend (Column 16, lines 6-8).

Regarding Claim 14, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses displaying annotation data in response to a viewer request (Column 6, lines 8-19, Column 12, lines 21-40).

Regarding Claims 17 and 46, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses that the mask comprises location information of two or more objects or entities in an annotated video frame in the corresponding video frame (Column 5, lines 54-65, Column 7, lines 22-48, Column 8, lines 5-50).

Regarding Claims 18 and 47, Srinivasan and Wistendahl disclose all the limitations of Claims 17 and 46 respectively. Srinivasan discloses the location information includes a graphics location reference that represents a fixed relation to a set of pixels associated with each object (Column 9, lines 19-55, Figure 4).

Regarding Claims 19 and 48, Srinivasan and Wistendahl disclose all the limitations of Claims 18 and 47 respectively. Srinivasan discloses a table of pixels based on a tracking box and object (Figure 4). Therefore, it is necessarily included that the pixels include the upper left most pixel in the associated pixel set if the object that is being tracked is located at the upper most left corner (Figure 4, Figure 3).

Regarding Claims 20 and 49, Srinivasan and Wistendahl disclose all the limitations of claims 18 and 48 respectively. Srinivasan discloses a table of pixels based on a tracking box and object (Figure 4), if the object is in the center position then the centroid pixel is in the associated pixel set (Figure 4, Figure 3). Therefore, it is necessarily included that the pixels include the centroid pixel in the associated pixel set.

Regarding Claim 41, Srinivasan and Wistendahl disclose all the limitations of Claim 35. Srinivasan discloses inserting the annotation data timing information in a vertical blanking interval of an analog video signal (Column 36, lines 36-41).

Regarding Claim 43, Srinivasan and Wistendahl disclose all the limitations of Claim 35. Srinivasan discloses the transmitting the timing information and video information to a broadcast network and subsequently to the augmented video transmission generator (Column 5, lines 54-65, Column 6, lines 29-40, Column 7, lines 22-25, Column 36, lines 25-40).

Regarding Claims 21 and 50, Shoff discloses all the limitations of Claims 1 and 35 respectively. Srinivasan discloses that the mask comprises location information about an object in a video frame to be annotated or supplemental content to be added to video (Figure 4). Srinivasan is silent on the shape information. In analogous art, Wistendahl discloses that location and shape information of an object in the video frame (Column 10, lines 8-35). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Shoff to include shape information of an object in the video frame (Column 10, lines 8-35) as taught by

Wistendahl in order to use media content for interactive television (Column 1, lines 12-14, 45-67) as disclosed by Wistendahl.

Regarding Claim 51, Srinivasan and Wistendahl disclose all the limitations of Claim 50. Wistendahl discloses the shape information is represented by a hyper link (Column 10, lines 36-56). The hyperlink can be a graphical overlay of the object (Column 9, lines 28-33).

Regarding Claim 52, Srinivasan and Wistendahl disclose all the limitations of Claim 50. Wistendahl discloses the shape information is represented by an outline of the object (Column 10, lines 25-28).

Regarding Claim 56, Srinivasan and Wistendahl disclose all the limitations of Claim 1. Wistendahl discloses the receiver being configured to overlay a graphics image on a particular video frame for the particular video object based on the graphics data included in the corresponding mask (Column 9, lines 59-67, Column 10, lines 1-56), retrieve the identifier of the object mapping table from the corresponding mask response to a user selection associated with the overlaid graphics image (Column 6, lines 60-67, Column 7, lines 1-10, Column 9, lines 59-67, Column 10, lines 1-56); retrieve the object mapping table based on the retrieved identifier (Figure 3, Figure 7a); identify the indicia in the corresponding mask for the particular video object for which the graphics image was overlaid (Column 15, lines 3-5); locate the entry in the object mapping table with the identified indicia (Figure 5b, 51b, Figure 7a, Figure 7B); ; retrieving from the located entry the identify of the corresponding information data structures identified by the retrieved identifier (Column 6, lines 60-67, Column 7, lines 1-

10, Column 15, lines 3-5); locate the entry in the object mapping table with the identified indicia (Figure 5b, 51b, Figure 7a, Figure 7B); identify the information data structures associated with the located entry (Figure 5a, Figure 5b); retrieve the information data structures identified by retrieved identifier (Figure 2, Figure 3); and display information based on the retrieved information data structure on the display device (Figure 7a, Column 13, lines 54-62).

Regarding Claims 64 and 68, Srinivasan and Wistendahl disclose all the limitations of Claims 63 and 67 respectively. Srinivasan discloses comparing a current annotation data timing information with a current frame time of a current video frame (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52); retrieve the location and graphics data of the graphics images from the identified mask if the comparison results in a match (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52); and overlay one or more graphics images generated based on the retrieved graphics data on the one or more video objects appearing in the current video frame (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 21-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52).

Regarding Claims 65 and 69, Srinivasan and Wistendahl disclose all the limitations of Claims 64 and 68 respectively. Srinivasan discloses the receiver is further programmed to draw the one or more graphics images on a frame-by-frame basis

based on the graphics data included in a plurality of masks, the drawing of the one or more graphics images being synchronized to the corresponding video frame based on the annotation data timing information associated with the plurality of masks (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 21-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52). Wistendahl discloses drawing one or more graphic images on a frame-by-frame basis based on the graphics data included in a plurality of masks (Column 14, lines 10-21, Column 10, lines 8-61).

Regarding Claims 66 and 70, Srinivasan and Wistendahl disclose all the limitations of Claims 65 and 69 respectively. Wistendahl discloses the receiver being configured to overlay a graphics image on a particular video frame for the particular video object based on the graphics data included in the corresponding mask (Column 9, lines 59-67, Column 10, lines 1-56), receive a user selection associated with one of the overlaid graphics images for a particular video frame (Column 15, lines 3-5), retrieve the identifier of the object mapping table from the corresponding mask response to a user selection associated with the overlaid graphics image (Column 6, lines 60-67, Column 7, lines 1-10, Column 9, lines 59-67, Column 10, lines 1-56); retrieve the object mapping table based on the retrieved identifier (Figure 3, Figure 7a); locate the entry in the object mapping table for the video object associated with the user selection (Column 6, lines 60-67, Column 7, lines 1-10, Figure 5b, 51b, Figure 7a, Figure 7B, Column 13, lines 1-25, Column 14, lines 10-21); retrieving from the located entry the identify of the corresponding information data structures identified by the retrieved identifier (Column

6, lines 60-67, Column 7, lines 1-10, Column 15, lines 3-5); locate the entry in the object mapping table with the identified indicia (Figure 5b, 51b, Figure 7a, Figure 7B); identify the information data structures associated with the located entry (Figure 5a, Figure 5b); retrieve the information data structures identified by retrieved identifier (Figure 2, Figure 3); and display information based on the retrieved information data structure on the display device (Figure 7a, Column 13, lines 54-62).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan in view of Wistendahl, as applied to Claim 7 above, further in view of Shoff et al (US 6,240,555 and hereafter referred to as "Shoff").

Regarding Claims 9, Srinivasan and Wistendahl disclose all the limitations of Claim 7. Srinivasan and Wistendahl do not to disclose the headend is a satellite headend. In analogous art, Shoff discloses a post production environment (Figure 2, 22), a broadcast network (Column 4, lines 43-50), and the post production environment combines video data and synchronized timing data and transmits to a headend or node (Column 4, lines 43-50). Shoff discloses that the node is a satellite headend (Column 4, lines 45-52). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Srinivasan to include that the headend is a satellite headend (Column 4, lines 45-52) as taught by Shoff in order to enable viewer interactively with video program (Column 1, lines 8-14) as disclosed by Shoff.

9. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan in view of Wistendahl, as applied to Claim 35 above, further in view of Oguro et al (US 2001/0033739 and hereafter referred to as "Oguro").

Regarding Claim 42, Srinivasan and Wistendahl disclose all the limitations of Claim 35. Srinivasan disclose inserting timing information into the VBI of an analog signal (Column 36, lines (Column 25-40). Srinivasan and Wistendahl are silent the insertion of data in the vertical ancillary data or VBI of a digital video signal. Oguro discloses a television broadcast system, which transmits digital video signals to the user (Page 5, paragraph 0077) and inserts data into the VBI of a digital video signal (Page 5, paragraph 0076). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the combination to include inserting information in the VBI of a digital video signal (Page 5, paragraph 0076) as taught by Oguro in order to provide copy protect television broadcast programs of a digital video signal (Page 1, paragraphs 0001-0006) as disclosed by Oguro.

10. Claims 61, 62 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan in view of Wistendahl, as applied to Claims 1 and 35 above, further in view of Kaiser et al (US 6,615,408 and hereafter referred to as "Kaiser").

Regarding Claims 61 and 62, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses overlaying two or more graphics images for alerting a viewer of the interactive data (Column 6, lines 6-19). Srinivasan and Wistendahl do not explicitly disclose the overlaying of the graphics

images is for alerting a viewer of the interactive data associated prior to the viewer transmitting an interactive command with respect to one of video object or video objects. Kaiser discloses overlaying of the two or more graphics images is for alerting a viewer of the interactive data associated with the two or more video objects prior to the viewer transmitting an interactive command with respect to one of the two or more video objects (Figure 6B, Column 10, lines 20-41). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the combination to include overlaying of the two or more graphics images is for alerting a viewer of the interactive data associated with the two or more video objects prior to the viewer transmitting an interactive command with respect to one of the two or more video objects (Figure 6B, Column 10, lines 20-41) as taught by Kaiser in order display a locator or locators for a video object or objects without clutter video (Column 1, lines 8-11, 34-40) as disclosed by Kaiser and to make it easier for a user so that they do not have to determine what is interactive and provides more information.

Regarding Claim 72, Srinivasan and Wistendahl disclose all the limitations of Claim 1. Srinivasan discloses overlaying two or more graphics images for alerting a viewer of the interactive data in which a mask includes data enabled to identify video objects in a particular video shot (Column 6, lines 6-19). Srinivasan and Wistendahl do not disclose a visibility bit indicative of visually identify an object. Kaiser discloses a mask or hotspot includes a visibility bit or highlight information indicative of whether video objects appearing in the corresponding video frame are enabled for being visually identified for a particular video shot (Column 10, lines 20-42). Therefore, it would have

been obvious at the time the invention was made to one of ordinary skill in the art to modify the combination to include a visibility bit indicative of whether video objects appearing in the corresponding video frame are enabled for being visually identified for a particular video shot (Column 10, lines 20-42) as taught by Kaiser in order display a locator or locators for a video object or objects without clutter video (Column 1, lines 8-11, 34-40) as disclosed by Kaiser and to make it easier for a user so that they do not have to determine what is interactive and provides more information.

11. Claim 71 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan in view of Wistendahl, as applied to Claim 1 above, further in view of Reimer et al (US 5,553,221 and hereafter referred to as "Reimer").

Regarding Claim 71, Srinivasan and Wistendahl disclose all the limitations of Claim 1. Wistendahl disclose a corresponding data structure (Figure 2, Figure 3). Srinivasan and Wistendahl are silent on the corresponding information data structure is an object properties table storing one or more second entries, wherein each of the one or more second entries includes an information category and an identifier to a second one of the plurality of information data structures providing details for the information category. Microsoft Press 3rd edition Computer Dictionary defines data structure as an organization scheme, such as a record or array, that can be applied to data to facilitate interpreting the data or performing operations on it. In analogous art, Reimer discloses on the corresponding information data structure is an object properties table (Figure 8, 802, Figures 10A-10C, Figure 11, 1106) storing one or more second entries (Figures

10A-10C, Column 18, lines 45-57), wherein each of the one or more second entries includes an information category and an identifier to a second one of the plurality of information data structures providing details for the information category (Column 18, lines 45-56, Figure 10A, 1002, Figure 10B, 1012, Figure 10C, 1018, Figure 8, 802, Column 17, lines 40-47). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the combination to include corresponding information data structure is an object properties table (Figure 8, 802, Figures 10A-10C, Figure 11, 1106) storing one or more second entries (Figures 10A-10C, Column 18, lines 45-57), wherein each of the one or more second entries includes an information category and an identifier to a second one of the plurality of information data structures providing details for the information category (Column 18, lines 45-56, Figure 10A, 1002, Figure 10B, 1012, Figure 10C, 1018, Figure 8, 802, Column 17, lines 40-47) as taught by Reimer in order to link and present information of movies with underlying source information (Column 1, lines 8-11, 34-40) as disclosed by Reimer.

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated

by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 7,249,367 in view of Srinivasan.

The instant application's limitations of "a hyperlinked broadcast system comprising: a video source providing video program including a plurality of consecutive video frames" is met by the limitations of "A hyperlinked video broadcast system" of U.S. Patent No. 7,249,367.

The instant application's limitations of "an annotation system generating annotation data, the annotation data including only one mask for each video frame of the plurality of consecutive frames, each mask being stamped with the corresponding annotation data timing information based on a frame time of the corresponding video frame, each mask including location and graphic data of two or more graphic images to be overlaid on two or more video objects or entities in the corresponding video frame; the annotation data further including a plurality of object data packets, mask including

an identifier to an object mapping table including one or more of the plurality of object data packets, the object mapping table including at least one entry with an indicia from the corresponding mask identifying a particular video object, the entry further storing an identifier to a corresponding one of a plurality information data structures included in one or more of the plurality object data packets, the information data structures including information for the particular video object "is met by the limitations " a mask generator generating a plurality of masks, each mask corresponding to a particular video frame of a video program, each mask including graphics data associated with one or more video objects in the particular video frame, each mask including an identifier to an object mapping table including an entry associated with each of the one or more video objects in the particular video frame, each entry in the object mapping table referencing one or more information data structures including information associated with the corresponding video object; an annotation source providing a plurality of object data packets including the object mapping table and the one or more information data structures for the one or more video objects" of U.S. Patent No. 7,249,367.

The instant application's limitations of an augmented video information transmission generator receiving the annotation data, the video information, the augmented video information transmission generator generating an augmented video transmission signal comprising annotation data, the and the video information, transmits the augmented video transmission signal to a receiver" is met by limitation "a transmitter transmitting the television broadcast signal" of U.S. Patent No. 7,249,367.

wherein the augmented video information transmission generator associates the video information with the annotation data using the annotation data timing information, wherein the receiver receiving the augmented video transmission signal is program for each of the plurality of consecutive video frames to: retrieve the location and graphics data of the two or more graphics images from the identified mask if the comparison results in a match; and overlay the two or more graphics images on the corresponding two or more video object appearing in the video frame based on the retrieved location and graphics data, wherein the overlaying of the two or more graphics images is synchronized on a frame by frame basis with the movement of two or more video objects from the first location to the second location over the plurality of consecutive video frames” is met by limitations “wherein the receiver is programmed to retrieve and overlay the graphics image corresponding to the particular video object on the corresponding video frame, receive viewer actuation of the overlaid graphics image, and in response to the viewer actuation, review the indicia in the particular information data structure corresponding to the particular video object for determining whether the particular video object is linked to one of the plurality of multiplexed program streams, and in response to a determination that the particular video object is linked to one of the plurality of multiplexed program streams, retrieve from the data particular information data structure the identifier of the particular one of the plurality of multiplexed program streams, and switch from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams” of U.S. Patent No. 7,249,367.

The instant application is missing including "a plurality of multiplexed program streams, an identifier for a particular one of the plurality of multiplexed program streams, a particular one of the information data structures including an indicia indicative that a particular one of the one or more video objects is linked to one of the plurality of multiplexed program streams, and an encoder encoding the plurality of masks and the plurality of object data packets into a television broadcast signal; a transmitter transmitting the plurality of multiplexed program streams to a receiver." It would be obvious to modify U.S. Patent No. 7,249,367 to make the claim broader.

The instant application's "an annotation system tracking movement of two or more video objects appearing in each of plurality of consecutive video frames from a first location to a second location and generating annotation data timing information, an augmented video information transmission generator generating the annotation timing information, the augmented video information transmission generator generating an augmented video transmission signal comprising annotation data, the annotation data timing information, and the video information, transmits the augmented video transmission signal to a receiver, wherein the receiver compare a current annotation data timing information with a current frame time of a current video frame" are additional features.

It would be obvious to include the limitations in U.S. Patent 7,249,367 as they are disclosed by prior art. Srinivasan discloses an annotation system generating annotation data timing information (Column 7, lines 21-30, Column 8, lines 5-50), the augmented video information transmission generator receiving the annotation timing information,

the augmented video information transmission generator generating an augmented video transmission signal comprising annotation data, the annotation data timing information, and the video information (Column 5, lines 54-65, Column 6, lines 29-33, Column 11, lines 36-37, Figure 18, Column 3, lines 53-55, Column 4, lines 3-7, 17-24), wherein the augmented video information transmission generator associates the video information with the annotation data using the annotation data timing information (Column 5, lines 54-65, Column 6, lines 29-33, Column 11, lines 36-37), wherein the receiver compare a current annotation data timing information with a current frame time of a current video frame (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52).

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farzana E. Hossain whose telephone number is 571-272-5943. The examiner can normally be reached on Monday to Friday 7:00 am to 3:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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